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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/273,256	03/22/1999	KENJI SUZUKI	PMS-258709	6889

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EXAMINER

CRAIG, DWIN M

ART UNIT

PAPER NUMBER

2123

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/273,256

Applicant(s)

SUZUKI ET AL.

Examiner

Dwin M Craig

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

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DETAILED ACTION

1. Claims 1-21 have been presented for reconsideration in light of Applicant's amended Claims and Specification.

Specification

2. The requested changes to the paragraph starting on page 43, line 26 and ending on page 44, are approved by the Examiner.

Response to Arguments

3. Applicant's arguments filed on 31 December 2002 have been fully considered.

Examiners response is as follows;

3.1 Regarding Applicant's response to the 35 U.S.C. 112 2nd paragraph rejection of Claim 5;

Applicant's Amended Claim 5 overcomes the 35 U.S.C. 112 2nd paragraph rejection for improper antecedent basis. The Examiner drops the 35 U.S.C. 112 2nd rejection of Claim 5.

3.2 Regarding Applicant's response to the rejection of Claims 1 and 21 under 35 U.S.C. 103(a) as being unpatentable over Fishman U.S. Patent 6,112,133 in view of Kahn et al. U.S. Patent 4,866,635;

Applicant has argued that,

Claims 1 and 21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Fishman (U.S. Patent No. 6,112,133) in view of Kahn et al. (U.S. Patent No. 4,866,635). This rejection is respectfully traversed. The combination of Fishman and Kahn fails to teach or suggest all the features recited in rejected claims 14-20.

The amended claim 1 clarifies the relationship among the input machining information, the values of machining variables, and the efficiency analysis. Claim 1 recites a basic program that is created based on input machining information entered by a machinist as well as tool information stored in a tool data memory. The basic program is executed to derive the

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values of various machining variables, which are subsequently used to analyze the efficiency of the machining process. Based on the efficiency analysis, an advisory message is notified to the machinist in terms of how to improve the basic program to obtain a final machining program that enables the machining process to perform at the highest speed allowed by the underlying machine. The final machining program is therefore derived by improving the basic program according to the advisory message.

According to the amended claim 1, the input machining information differs from the machining variables. In addition, the tool information is different from the machining variables. The input machining information is from the machinist and the tool information is stored in a tool data memory. The values of the machining variables are derived by the basic program during its execution. Fishman discloses a visual system for generating a CNC program for machining parts. As correctly pointed out by the Examiner, in Fishman's system, part machining information serves as input used to prepare a machining program. The part machining information in Fishman's teaching corresponds to the input machining information recited in claim 1. But, the part machining information does not correspond to the machining variables in the claimed invention. As stated earlier, the values of the machining variables in the present invention are derived automatically during the execution of the basic program.

The Examiner asserts that as disclosed in Applicant's amended Claim language the machining variables are NOT just generated from the basic program, the Applicant's amended Claim states, *wherein a basic program for performing the machining process is generated on machining information input from the machinist and tool information stored in a tool data memory*, by Applicant's own admission (*see paragraph above*) the *Fishman* reference discloses the input of information by the machinist therefore the Basic program is using machining variables input by the machinist as disclosed in the *Fishman* reference (**Figure 5 Item 76, Figure 8, Col. 2 Lines 37-41, Col. 3 Lines 38-67 and Col. 4 Lines 1-5**). The Applicant's amended claim language does not reflect the distinction being argued and therefore the Examiner finds Applicant's arguments to be unpersuasive.

In addition, Fishman teaches an optimization module that analyzes efficiency based on the part machining information. In the claimed invention, it is not the input machining information that is used in efficiency analysis. Rather, it is the values of the machining variables derived by the basic program during its execution that are used in efficiency analysis. Furthermore,

The Examiner asserts that the in Applicant's amended Claim the following language appears, "a basic program for performing the machining process is generated based on machining information input from the machinist..." the Applicant's current Claim language does not support the position that the efficiency analysis is based ONLY on the data in the Claimed tool data memory. The Examiner asserts that the Applicant's arguments are unpersuasive.

Applicant asserts that,

Fishman does not teach about an advisory message to the machinist. The output from Fishman's system is a default machining program prescribing a sequence of operations formed based on part machining information..

Furthermore, with the claimed invention, the machinist may simply follow the advisory message to improve the basic program without needing special knowledge or experience. The improvement recommended in the advisory message ensures the highest speed allowed by the underlying machine. According to Fishman, an operator may modify a standard chart by graphically dragging the points on the chart to suit operator's experience (column 7, lines 13-15). Experience is required to perform the modification. In addition, such modification does not guarantee that the underlying machining process is to be performed at the highest speed allowed by the capacity of the underlying machine. Therefore, Fishman does not disclose, teach, or fairly suggest the same as what is claimed in claims 1.

The Examiner asserts that the *Fishman* reference does not really have to teach an advisory message, the *Kahn et al. U.S. Patent 4,866,653* patent is relied upon to reject this limitation of Claims 1 and 21. The Examiner notes that nowhere in amended Claims 1 and 21 is there language that indicates that the basic program is relieving the machinist/operator of the requirement to have experience or knowledge. In fact Applicant's amended Claim language clearly reads, "the machining process is generated based on machining information input from the machinist..." which indicates that in fact there is a requirement of experience and knowledge

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on the part of the machinist and therefore by Applicant's Own Admission, the Fishman reference does teach the invention as disclosed in Applicant's amended Claims.

The Applicant has asserted that,

Kahn et al. does not remedy the above mentioned deficiencies. Kahn et al. discloses, as correctly pointed out by the Examiner, merely an expert system for selecting the best repair procedure. It does not teach generation of the values of various machining variables via a basic program, established based on the machinist's input machining information and tool information, and the use of such generated machining variables to perform efficiency analysis so that a suitable advisory message can be selected to guide the machinist to improve the basic program to generate a final machining program enabling the best utilization of the underlying machine.

The amended claim 21 contains features similar to those claimed in claim 1. As stated above, Fishman does not teach or suggest a means to derive the values of machining variables during the execution of a basic program, use such derived values to perform efficiency analysis, select an advisory message according to the efficiency analysis, and notify the machinist to improve the basic program to enable the machining program to achieve the highest speed allowed by the underlying machine, as recited in claim 1. Kahn et al. fails to remedy the deficiencies of Fishman. Therefore, the Applicant respectfully requests that the rejection of claim 21 under 35 U.S.C. § 103(a) be withdrawn. Claim 21 is now patentable over the combination of Fishman and Kahn et al.

The Examiner asserts that the *Fishman* reference discloses the generation of machining variables and therefore there is no need to rely on the *Kahn et al.* reference to teach that limitation, (*see Fishman U.S. Patent 6,112,133 Figure 12, Figures 8, 9A, 9B, 9C, 11, 12, Col. 7 Lines 5-19, Col. 7 Lines 50-67*). The Examiner has found Applicant's arguments to be unpersuasive and upholds the original 35 U.S.C. 103 rejection of Claims 1 and 21 based on *Fishman U.S. Patent 6,112,133* in view of *Kahn et al. U.S. Patent 4,866,635*.

The Applicant has asserted that,

Claim 13 has been rejected under 35 U.S.C. §103(a) over Fishman (U.S. Patent No. 6,112,133) in view of Kahn (U.S. Patent No. 4,866,635). The rejection is respectfully traversed. The combination of Fishman and Kahn fails to teach or suggest all the features recited in rejected claim 13. Amended claim 13 contains features similar to those claimed in claim 1. As stated above, Fishman does not teach or suggest a means to derive values of machining variables during the execution of a basic program, use such derived values to perform efficiency analysis to select an advisory message, and to

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notify the machinist to improve the basic program to enable the machining program to achieve the highest speed allowed by the underlying machine, as recited in claim 1. Kahn et al. fails to remedy the deficiencies of Fishman.

The Examiner has found Applicant's arguments to be unpersuasive, (*please see the previous discussions concerning the Fishman and Kahn et al. references*). The Examiner maintains his earlier rejection under 35 U.S.C. 103 as it pertains to Claim 13.

3.3 Regarding Applicant's response to the rejection of Claims 2-12 under 35 U.S.C. 103(a) as being unpatentable over Fishman U.S. Patent 6,112,133 in view of Kahn et al. U.S. Patent 4,866,635:

The Applicant has asserted that,

Claim 2-12 depend from claim 1 and, as stated above, Fishman does not teach or suggest a means to derive values of machining variables during the execution of a basic program, use such derived values to perform efficiency analysis to select an advisory message, and to notify the machinist to improve the basic program to enable the machining program to achieve the highest speed allowed by the underlying machine, as recited in claim 1. Kahn et al. fails to remedy the deficiencies of Fishman.

Consequently, claims 2-12 are patentable at least for the reasons stated above with respect to claim 1 and for the addition features recited therein.

The Examiner asserts that the *Fishman* reference does teach a means (**Figure 5**) to derive values of machining variables (**Figure 5 Item 76 and Figure 12**) during the execution of a basic program (**Figure 5 Item 34**) use such derived values to perform efficiency analysis (**Col. 7 Lines 5-19**). The *Fishman* reference does not expressly disclose an advisory message to notify the machinist but the *Kahn et al.* reference does provide that limitation (*see section above*) and therefore the Examiner has found applicant's arguments to be unpersuasive. The Examiner upholds the earlier 35 U.S.C. 103 rejection of Claims 2-9. However the Examiner does find Applicant's arguments with regards to Claims 10, 11 and 12 to be persuasive and withdraws the 35 U.S.C. 103(a) rejections of Claims 10, 11 and 12.

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3.4 Regarding Applicant's response to the rejection of Claims 14-20 under 35 U.S.C.

103(a) as being unpatentable over *Fishman U.S. Patent 6,112,133* in view of *Kahn et al. U.S. Patent 4,866,635*:

The Applicant has asserted that;

Claims 14-20 have been rejected under 35 U.S.C. §103(a) over *Fishman* (U.S. Patent No. 6,112,133) in view of *Kahn* (U.S. Patent No. 4,866,635). The rejection is respectfully traversed. The combination of *Fishman* and *Kahn* fails to teach or suggest all the features recited in rejected claims 14-20. Claim 14-20 depend from claim 13 and, as stated above, *Fishman* does not teach or suggest a means to derive values of machining variables during the execution of a basic program, use such derived values to perform efficiency analysis to select an advisory message, and to notify the machinist to improve the basic program to enable the machining program to achieve the highest speed allowed by the underlying machine, as recited in claim 13. *Kahn et al.* fails to remedy the deficiencies of *Fishman*.

The Examiner asserts that these arguments concerning the limitations disclosed in the *Fishman* and *Kahn et al.* references have been covered in the previous discussions (*see section above*) and therefore the Examiner has found applicant's arguments to be unpersuasive in regards to Claims 14-17. The Examiner upholds the earlier 35 U.S.C. 103 rejection of Claims 14-17. However the Examiner has found Applicant's arguments to be persuasive in regards to Claims 18, 19 and 20. The old 35 U.S.C. 103(a) rejections of Claims 18, 19 and 20 have been withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-9, 13-17, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fishman U.S. Patent 6,112,133** in view of **Kahn et al. U.S. Patent 4,866,635**.

4.1 As regards **Claims 1 and 21** these claims are almost identical, except that **Claim 1** is for an apparatus and **Claim 21** is for a method.

4.2 As regards **Claims 1 and 21** the *Fishman* reference teaches about a visual system for generating a CNC program for machining a part by an operator (aiding a machinist in preparing a programmed machine for a machining process) using an interface module (**Col. 3, lines 24-26, Figure 6, Col. 5, lines 19-22**). This program is prepared by inputting part information (machining variables) into a computer system (graphical user interface system) (**Col. 3, lines 60-65**), which is equivalent to the section of the claim concerning running a basic program "for setting values of various machining variables based on information input by the machinist". This part machining information is analyzed (analyzing means) by a process optimization module to optimize the efficiency of machining the part (**Col 6, lines 59-65**). One facet of the Fishman patent that is particularly pertinent to this application is that the process optimization module uses a material machinability database containing recommended material removal speeds as a function of tool parameters. This machinability optimization analysis can be presented to the operator (notify the machinist) to recommend or advise the operator about the current efficiency or how to improve his machining process (**Figure 10**). This chart discloses an increase in machining speed per a selected drill tool diameter for work piece material type (High Speed Steel). The operator could stay with or modify his current machining variable selection to decrease machining time (increases in feet per minute) (**Col. 7, lines 14-19**).

The *Fishman* reference does not expressly disclose an advisory message to a machinist; after all the input is completed. The *Fishman* reference does disclose, the main output from Fishman to the machinist is a default machining program containing a sequence of operations which the machinist may change if he so desires.

The *Kahn et al.* reference discloses an expert system for selecting the best repair procedure among a plurality of repair procedures. The output of the system is a recommendation (notification) that selects the optimum procedure for the given input diagnostics.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have modified the Fishman reference with the *Kahn et al.* reference because (*motivation to combine*) combining the output from *Fishman* with the recommendation (notification) system of *Kahn et al.* in order that the output from *Fishman* would be presented as an advisory message instead of a machining program. It would be obvious that the program displayed by the *Fishman* reference is based upon the optimization program (analysis means).

4.3 As regards **Claim 13** the *Fishman* reference discloses a computer visual system for generating a CNC program for machining a part by an operator using an interface module (**Figure 6, Col. 3 Lines 24-26, Col. 5 Lines 19-22**). The program is prepared by the machinist inputting part information into a computer system (**Col. 3 Lines 60-65**), displaying the tool path and other information (**Col. 6 Lines 53-55**), a process optimization module, (**Col. 6 Lines 59-65**). The machinability optimization analysis can be presented to the operator to recommend or advise the operator about the efficiency or how to improve his machining process (**Figure 10**).

The *Fishman* reference does not expressly disclose an advisory message to the machinist wherein the machinist may change an operating parameter if he so desires.

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The *Kahn et al.* reference discloses an advisory message displayed to a machinist wherein the machinist may change an operating parameter if he so desires (**Col. 14 Lines 66-67, Col. 15 Lines 1-5, Col. 21 Lines 5-11**).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have modified the *Fishman* reference with the *Kahn et al.* reference because (*motivation to combine*) the *Kahn et al.* reference teaches a method to interact with the user to solve problems and properly diagnose the observed problems (*Kahn et al. Col. 4 Lines 11-16*).

4.4 As regards **Claims 2 and 14**, the *Fishman* reference teaches machinability optimization analysis which can be presented to the operator to recommend or advise the operator about the current efficiency or how to improve his machining process (**Figure 10, Col. 7 Lines 14-19**).

The *Fishman* reference does not expressly disclose, sending an advisory message.

The *Kahn et al.* reference discloses an advisory message displayed to a machinist wherein the machinist may change an operating parameter if he so desires (**Col. 14 Lines 66-67, Col. 15 Lines 1-5, Col. 21 Lines 5-11**).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have modified the *Fishman* reference with the *Kahn et al.* reference because (*motivation to combine*) the *Kahn et al.* reference teaches a method to interact with the user to solve problems and properly diagnose the observed problems (*Kahn et al. Col. 4 Lines 11-16*).

4.5 As regards **Claims 3 and 4**, the *Fishman* reference teaches about the machinability optimization module or analysis which can be presented to the operator on a visual display to recommend or advise the operator about the current efficiency or how to improve his

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machining process (**See Figure 10**). This chart discloses or notifies the operator of a plurality of "messages" in chart format of machine variable parameters from its computer memory from its analysis of machining speed per a selected drill tool diameter for the work piece material type (High Speed Steel) (**Col. 7, lines 14-19**).

The *Fishman* reference does not expressly disclose sending messages to a machinist; after all the input is completed, the main output from Fishman to the machinist is a default machining program containing a sequence of operations which the machinist may change if he so desires.

The *Kahn et al.* reference discloses an expert system for selecting the best repair procedure among a plurality of repair procedures. The output of the system is a recommendation (notification or displayed message) that selects the optimum procedure for the given input diagnostics. Kahn et al teaches also teaches about notes that are entered into memory to be used as output messages (**Col. 14 Line 66-67 and Col. 15 lines 1-5**) and messages that are to be displayed in response to analysis of input data (**Col. 21 lines 5-11**).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have modified the *Fishman* reference with the *Kahn et al.* reference because (*motivation to combine*) the *Kahn et al.* reference teaches a method to interact with the user to solve problems and properly diagnose the observed problems (***Kahn et al. Col. 4 Lines 11-16***).

4.6 As regards **Claim 5** the *Fishman* reference discloses using an interface module or input device for setting machining variable values for its particular machining process, i.e., part face information which includes boundary, orientation, hole diameter and depth, and machining function to machine the part, (**Figure 8, Col. 5 lines 19-30, Col. 6 lines 1-5**). Once all this part

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face information is inputted into the system it is transferred to the process optimization module (analyzing means) for analysis (**Column 6 line 60**).

4.7 As regards **Claim 6** the *Fishman* reference discloses an optimization software program or a simulation program that analyzes machining process data from information transferred or executed from the interface module (**Col 6 Lines 53-63**).

4.8 As regards **Claims 7 and 15** the *Fishman* reference discloses the optimization modules' material machinability database which does analyze (analyzing means) or select the material cutting speeds and feed rate (rate of depth of cut) based on the face information supplied by the interface module (**Figure 1c, 7A, 7B, 7C, 8, 10, 11, 12, Col. 3 Lines 38-67, Col. 4 Lines 1-5**).

4.9 As regards **Claims 8 and 16** the *Fishman* reference discloses Fishman the optimization modules' material machinability database which does analyze (analyzing means) or select the material's recommended cutting speeds from the specified face information supplied by the interface module. The operator can be notified by customized charts about the efficiency of the variable relationships for subsequent modification (**Col. 7 Lines 5-15**).

4.10 As regards **Claims 9 and 17** the *Fishman* reference does disclose analyzing or selecting a recommended or an optimal spindle rotating speed during cutting operation (**Figure 11, Col. 7 Lines 5-34**).

5. **Claims 10, 11, 12, 18, 19 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fishman U.S. Patent 6,112,133** in view of **Cameron et al. U.S. Patent 5,412,583**.

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5.1 As regards independent **Claims 1, 13, and 21** see the rejections in paragraph 4 above.

5.2 As regards **Claims 10, 12, 18 and 20** the *Fishman* reference does not expressly disclose an advisory message to the machinist to increase the speed of the cutting tool.

The *Cameron et al.* reference discloses an advisory message to the machinist (**Figure 11, Col. 4, Lines 56-58**) and a message to change the speed (**Figure 9, Col. 4 Lines 59-54, Col. 2 Lines 64-67**).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have modified the *Fishman* reference with the *Cameron et al.* reference because (*motivation to combine*) by prompting the user the machine tool being used can be operated in the most efficient manner (*Cameron et al. Col. 2 Lines 64-67, Col. 3 Lines 1-2*).

5.3 As regards **Claims 11 and 19** the *Fishman* reference discloses changing tools (**Figure 3a, Figure 5 Item 30, Col. 7 Lines 50-67**).

The *Fishman* reference does not expressly disclose sending the message to the operator to change the tool.

The *Cameron et al.* reference discloses an advisory message to the machinist (**Figure 11, Col. 4, Lines 56-58**).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have modified the *Fishman* reference with the *Cameron et al.* reference because (*motivation to combine*) by prompting the user the machine tool being used can be operated in the most efficient manner (*Cameron et al. Col. 2 Lines 64-67, Col. 3 Lines 1-2*).

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6. **Claims 1, 13 and 21** are being rejected under 35 U.S.C. 103(a) as being unpatentable over **Yamazaki et al. U.S. Patent 6,401,004** in view of **Cameron et al. U.S. Patent 5,412,583**.

6.1 As regards **Claims 1, 13 and 21** the *Yamazaki et al.* reference discloses an apparatus (**Figure 2 Item 25**) for aiding a machinist in preparing a programmed machine for a machining process (**Figures 2**) with a basic program (**Figure 4A, 4B, 4C**), with information stored in a tool data memory (**Figure 1 Item 6, Figure 2 Item 23**), a computer for executing a basic program to obtain values of various machining variables (**Figures 1, 2, 3**), an analyzing means for analyzing the variable values obtained during execution of the basic program to determine the efficiency of the machining process (**Figure 16 Lines 1-7**).

The *Yamazaki et al.* reference does not expressly disclose an advisory message to the machinist.

The *Cameron et al.* reference discloses an advisory message to the machinist (**Figure 11, Col. 4, Lines 56-58**).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have modified the *Fishman* reference with the *Cameron et al.* reference because (*motivation to combine*) by prompting the user the machine tool being used can be operated in the most efficient manner (*Cameron et al. Col. 2 Lines 64-67, Col. 3 Lines 1-2*).

Conclusion

7.

7.1 The previous rejections of Claims 1-9, 13-17 and 21 have been upheld by the Examiner. The old rejections of Claims 10, 11, 12, 18, 19 and 20 have been withdrawn. An

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updated search has revealed new art that has not been applied previously by the Examiner. New rejections of Claims 1-21 have been made by the Examiner, as a result this action is made **NON-FINAL**.

7.2 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwain M Craig whose telephone number is 703 305-7150. The examiner can normally be reached on 9:00 - 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska can be reached on 703 305-9704. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-3900.

DMC
March 4, 2003

Russell Frejd
RUSSELL FREJD
PRIMARY EXAMINER